



STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

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August 7, 1986

CERTIFIED RETURN RECEIPT REQUESTED  
(P402 459 398)

Mr. Glen M. Eurick  
Environmental and Occupational  
Health Coordinator  
Barrick Mercur Gold Mines, Inc.  
P.O. Box 838  
Tooele, Utah 84074

Dear Mr. Eurick:

Re: MRP Amendment Plans, Mercur Canyon Project, Marion Hill,  
Golden Gate and Sacramento Pits, Barrick Mercur Gold  
Mines, Inc., ACT/045/017, Tooele County, Utah

The Division has reviewed the latest response provided by Barrick Mercur Gold Mines, Inc., (received April 25, 1986) to our March 7th deficiency review letter. The following technical comments remain to be addressed from our latest review of the submittal:

Rule M-3 - JRH

The disturbed areas delineated on Maps 1.1-1, 1.2-1, 2.0-1 and 2.4-1 conflict with the area delineated on Plate 1. The acreage outlined on those maps drawn at 1"=400' is calculated at approximately 1175 acres. The area measured on Plate 1 is approximately 875 acres. Neither of these measurements correspond to the acreage given in the text on page II-34a of the plan. A total acreage of 451 acres is given for the new pits, plus 636 acres for the other facilities which totals 1087 acres.

Apparently, the acreage breakdown for the specific areas was taken from Map 2.4-1 (FINAL RECLAMATION PLAN), which excludes some areas that are included within the disturbed area boundaries as shown on the other maps.

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To alleviate this informational conflict, Map 2.4-1 should be revised to precisely delineate the disturbed areas and the respective acreages. Disturbed areas shown on the other plates and drawings should approximate the general disturbed area boundaries, but should also include a reference to Map 2.4-1 for specific details as to the location and extent of the disturbed acres as used in the mine plan. The breakdown of the areas provided on the map should match the breakdown of the areas provided in the plan on page II-34a, and as used elsewhere in the text.

The total acreages shown on Table 2.3-1 and Table 2.4-1 differ. The correct acreage should be determined and the figures and the mass balance adjusted accordingly.

The surface and mineral ownership Map 1.2-1 is still unclear as to identification of surface and mineral ownership boundaries. This map must be clarified and resubmitted to the Division.

Rule M-10(3) - JRH

Impoundments to be left by the operator, (such as in the mine pit bottoms), will likely require adequate final design details and input or approval from other state agencies (Water Rights, State Health, Wildlife Resources). Therefore, the Division cannot consider approval of a variance from this rule at this time.

Rule M-10(5) - JRH

The operator has provided sufficient information in the mine plan application to obtain a variance to the 45 degree limit for the pit highwalls. Upon cessation of mining operations, Barrick must provide the Division with an analysis of the final pit slopes to remain after reclamation. Final approval of the pit slopes shall be determined at that time.

Rule M-10(6) - JRH

The operator has sufficiently responded to Division concerns regarding final treatment of cyanide during operations. However, final approval of the facilities shall be subject to State Health, and/or other regulatory agency approvals which may have further conditions subject to the treatment and final disposition of the leach dump.



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Rule M-10(13) - JRH

The Division has not received a copy of the final dam designs, nor a copy of the approval from the State Engineer's Office.

More detail should be incorporated into the reclamation plan to show drainage structures upon reclamation and the final overall configuration of the area upon completion of the reclamation work. Primarily, design details of the outlet structure resulting from breaching of the dam should be provided.

Rule M-10 (14) - JSL

- (A) The operator has listed a soil series summary in Appendix 2 which defines SAR values for various soil series. This table is footnoted with an inaccurate SAR equation. Thus the SAR values developed from this equation are deemed inaccurate. Corrected SAR value must be resubmitted using the following:

$$SAR = [Na^+]/([Ca^{2+} + Mg^{2+}]/2)^{1/2}$$

Where all concentrations are expressed in meg/liter (Normality) not ppm as previously expressed.

- (B) On page II-63 the operator must change the definition of topsoil to state the following:

Topsoil is defined as the original or present O, A and E horizon.

All B, C and R subsurface horizons are not defined as topsoil.

- (C) In Table 2.4.1, pg II-64, #2 (Topsoil Required for Reclamation of Expansion), the operator lists the total volume of the Ant Kill Dump and Security Dump equal to 190,049 cu. yds. According to the information submitted prior to this total in Table 2.4-1, the actual total equals 205,539 cu. yd. In Table 2-4-3, Pg II-77C the operator lists the total soil volume of the Ant Hill Dump and Security Dump as 190,049 cu. yd. Please clarify this discrepancy.

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General:

The Division has determined that the amount of salvageable topsoil present is sufficient to facilitate final reclamation success. The operator shall ensure that all suitable growth materials shall be removed and protectivity stockpiled. At the time that these soil materials are removed and stockpiled, the operator shall conduct appropriate surveys detailing the volume (cyd) of excavated soil material for a given specific area, (site identification and acreage). All information shall be submitted to the Division within 30 days of topsoil stripping and prior to overburden removal. The soil stockpiles shall not be disturbed until such time that the renewal of these materials will be redistributed for final reclamation efforts and/or when apparent hazardous conditions shall potentially degrade the topsoil material.

Rule M-3(2)(e) - SCL

The operator must provide a specific seed mixture for topsoil stockpiles for Division approval prior to any seeding.

On pp. II-68 and 69 it is indicated that mulching will be done before seed is broadcast or hydroseeded. Mulch must be placed after seeding or else the seed will not come into contact with the soil.

Rule M-3(2)(f) - SCL

The operator has not provided a timetable for reclamation. Table 2.4-3 is a description of reclamation practices to be undertaken in various areas. This does not constitute a reclamation timetable.

Rule M-3(10) - SCL

The wildlife mitigation plan addendum indicates that reflecting devices would reduce deer-vehicle collisions. Is the operator committing to installing reflecting devices on Highway 73? Please specify the company's intentions.

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The revised bonding calculations received (July 10, 1986) are still under review by the technical staff. It is anticipated that this review will be completed during the week of August 11-15, 1986. Any comments which result will be forwarded to you at that time.

Again, the Division appreciates your cooperation and patience in completing this permitting action. Should questions or concerns arise, please contact me or D. Wayne Hedberg of the permitting staff at your convenience.

Sincerely,

*L.P. Braxton*

L. P. Braxton  
Administrator  
Mineral Resource Development  
and Reclamation Program

jvb  
cc: Dennis Dalley, State Health  
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